TOMOS

Racing

NAVODILO ZA UPORABO
USER'S MANUAL

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YOUNGST'R
YOUNGST'R FULL RACING 45

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WARNINGS

Prior to operating the vehicle, carefully read this User's Manual in order to get acquainted with its operational characteristics and safe and proper operation.

1. Fuel is extremely flammable and explosive; therefore it requires special handling precautions:

- Stop the engine prior to refilling the tank;
- Fill the tank outdoors; never approach the tank with a lit cigarette, open flame or sparks; and
- Thoroughly wipe off any spilled fuel

2. The engine should not be run in an enclosed space or nearby entrances to lower-level areas (cellars etc.). Engine exhaust gases are toxic and denser than normal atmospheric air.

3. When starting or running the engine, never touch the ignition coil, high voltage cable, ignition spark plug cap or other parts of the electrical system.

4. The vehicle is equipped with a catalysts exhaust system causing high temperatures. When the engine is running and for some time after it has stopped do not touch its hot parts: the cylinder, the cylinder head, exhaust silencer. Do not touch the brake components too.

5. When the engine is running beware of the engine's rotating parts.

No modification of the vehicle, stripping-off any parts or installing non-original spare parts is permitted. The vehicle owner is specifically warned that any modification to the exhaust system can only result in the vehicle's deteriorated operation, without any positive effects on engine performance and causes higher air pollution.

RIDING SAFETY TIPS

Riding a twowheeler is simple, yet it requires some skills and experience which can only be accumulated progressively. Prior to each ride, observe the following rules:

1. Check the proper functioning of all vehicle assemblies.

2. When riding, wear light-colored, preferably light-reflective clothes; ride with your lights on; avoid riding in other drivers "blind spots" to prevent danger of other drivers "overlooking" you.

3. Abide by all traffic regulations; above all, adjust your riding speed to the road conditions and your skill level.

4. Do not hand the vehicle over to any inexperience riders.

5. Prior to changing lanes, always check that this can be done safely, and signal your intention in time Be careful when riding trough road crossings or passing other vehicles (including parked vehicles)..

6. Always ride with your helmet on, be properly dressed and wear boots.

7. Pay due the attention to what is going on in front of you and behind you (rear mirror) and try to anticipate events

8. The braking affects the loading on each wheel: the front braking increases; whereas braking with the rear brake only increases the braking distance while also reducing vehicle stability; hence use the rear brake with caution.

TECHNICAL SPECIFICATIONS

Model **YOUNGST'R-R/**RACING 45

Variants **A24B – 45km/h**
A26B – 45km/h
A24D – 25km/h
A24E – 20km/h

Engine	Type	single-cylinder, two-stroke air-cooled
	Displacement	49 cm3
	Cylinder bore diameter	38 mm
	Piston stroke	43 mm

VARIANT A24B:

Compression ratio	10 : 1
Engine power	1,7 kW at 4800 min^{-1}
Torque	3,6 Nm at 3500 min^{-1}
Maximum speed	45 km/h
Fuel consumption	1,8/100km

VARIANT A26B: (RACING 45)

Compression ratio	10 : 1
Engine power	2,3 kW at 5700 min^{-1}
Torque	4,7 Nm at 3800 min^{-1}
Maximum speed	45 km/h
Fuel consumption	1,8/100km

VARIANT A24D:

Compression ratio	6 : 1
Engine power	1,0 kW at 3500 min^{-1}
Torque	3,4 Nm at 2250 min^{-1}
Maximum speed	25 km/h
Fuel consumption	2,5/100km

VARIANT A24E:

Compression ratio	6 : 1
Engine power	1,0 kW at 3500 min^{-1}
Torque	3,1 Nm at 2500 min^{-1}
Maximum speed	20 km/h
Fuel consumption	2,8/100km

Starter	Electric (version)	12V 170W
	Kick-starter	

Fuel	Tank capacity	3,5 l (0,5 l reserve)
	Engine oil reservoir	800 cm^3
	Fuel consumption	1,8/100km
Suspension	Front forks travel	70 mm
	Rear shock absorber travel	16 mm
Wheels	Front tire dimensions	120/70-12
	Rear tire dimensions	120/70-12
	Front tire inflation pressure	2,3 bar
	Rear tire inflation pressure	2,3 bar
Electrical system	Magneto	12V 80W
	Spark advance	preset
	Spark plug-A24B	Bosna F75, BOSCH-W7AC
	Spark plug -A24D, A24E	Bosna F75, Champion-L86
	Sparlk plug-A26BAC	NGK BR8ES or equivalent
	Spark plug electrode clear.	0,8 mm
	Headlight	12V 35W/35W + 12V/4W
	Tail light	12V 5W
	Stop light	12V/10W
	Speedometer illumination	12V 2W
	Direction indicators (version)	12V 10W
	Direction indicator signal light	12V 1,5W
	Oil level signal light	12V 1,5W
	Low beam signal light	12V 1,5W
	Main beam signal light	12V 1,5W
	Battery (version)	12V 4Ah
	Fuse (version)	8A
Dimensions And weights	Wheelbase	1.155 mm
	Total length of vehicle	1.655 mm
	Vehicle mass (empty fuel tank)	62 + 3 kg
	Maximum permitted total weight	160 kg

TECHNICAL DESCRIPTION

1. Rear brake lever
2. Direction indicator switch (version)
3. Horn switch
4. Main beam/low beam switch
5. Speedometer
6. Brake fluid reservoir
7. STOP switch
8. Electric start pushbutton (version)
9. Throttle lever
10. Front brake lever
11. Direction indicator signal light (version)
12. Oil level signal light (version)
13. Main beam signal light
14. Low beam signal light
15. Luggage carrier
16. Engine oil reservoir, cap
17. Battery (version)
18. Air filter
19. Carburetor, choke
20. Fuel tank cap
21. Steering lock
22. Fuel petcock
23. Oil pump (version)
24. Kick starter pedal
25. Fuse (version)
26. Fuel filling vent
27. Ignition switch (version)

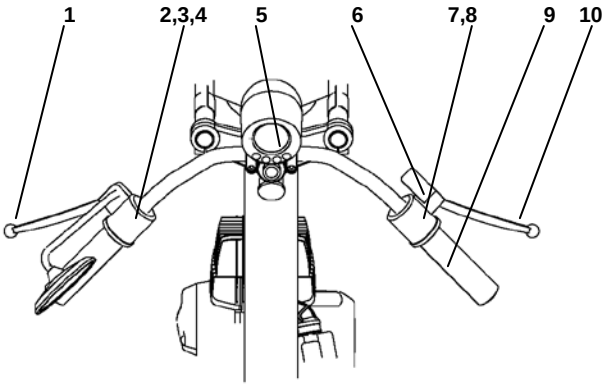


Fig. 1

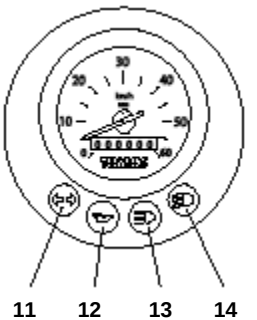


Fig. 2

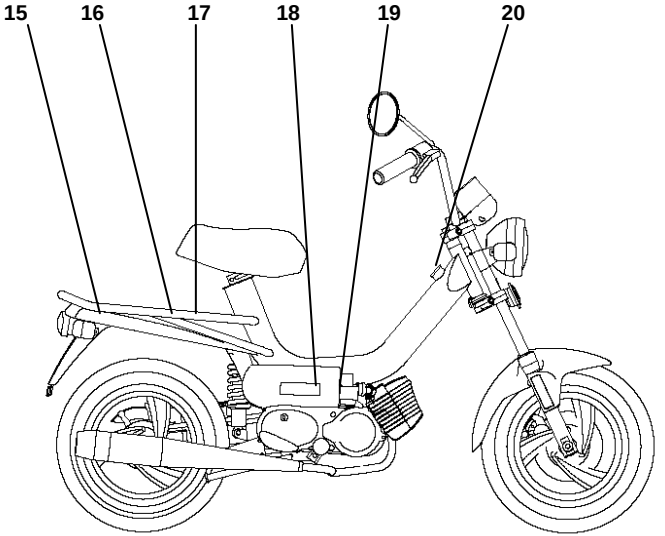


Fig. 3

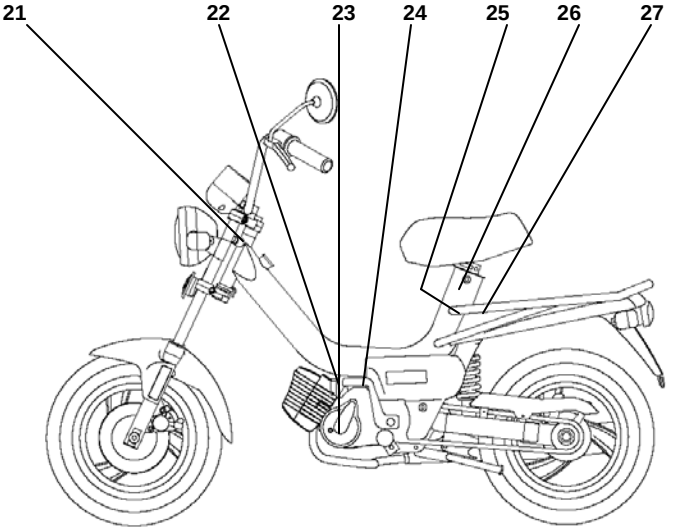


Fig. 4

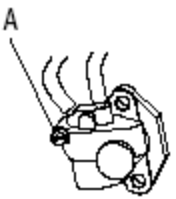


Fig. 5

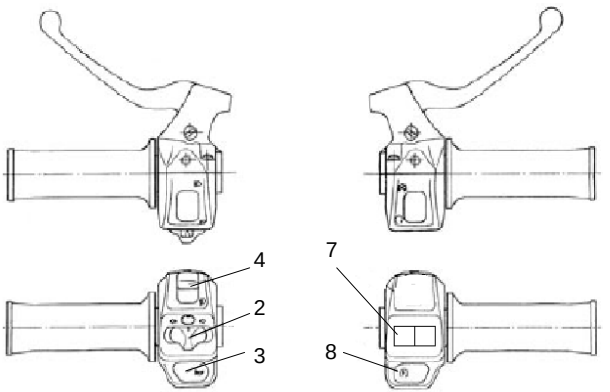


Fig. 6

VEHICLE OPERATION

Fuel
EUROSUPER 95 and two-stroke engine oil.
Your vehicle is equipped with an oil pump, which adds a specified amount of oil to the petrol (approx. 2%). Pour two-stroke oil into the separate oil reservoir (16, Fig. 3) - approximately 0,8 liter).

Use only high quality fully synthetic two-stroke oil.

CAUTION!
Prior to starting the engine for the first time, fill the fuel tank (20, Fig. 3) with approx. 1 liter mixture of two-stroke oil and gasoline in the ratio of 1:50 (2%), then start the engine and let it run for at least 8 minutes in order to allow the oil pump to fill the suction pipe.
Before this take off the oil pump cover (23, Fig. 4) and unscrew the bolt on oil pump (A, Fig. 5) and wait till oil comes from reservoir. Tighten the bolt.

Engine starting
Open the fuel cock (Fig. 7). Note: A – fuel supply shot, B – fuel supply on, C - reserve.
If the engine is cold, press the cold start lever (B, Fig. 8).

Kick start version:
With the throttle fully closed, press the rear brake lever and press the kick-starter lever (24, Fig. 4) – without opening the throttle.
If starting the engine when it is still warm, the throttle must be fully opened.

Pedal version:
With the throttle fully closed, press the rear brake lever and press the pedals (24, Fig. 4) backwards – without opening the throttle.
If starting the engine when it is still warm, the throttle must be fully opened.

Electric starter version:
Enter the key in the ignition switch (27, Fig. 4) and turn it to the ON position. Switch on the stop switch (7, Fig. 6). With the throttle fully closed, press the rear brake lever and press electric start pushbutton (8, Fig. 6).

Caution: If the engine on the electric start version fails to start, release the starter pushbutton. This prevents the battery from draining. Do not keep the engine start pushbutton depressed longer than 5 seconds. Should the electric starter fail to start the engine start the engine by using the kick-starter pedal.
When using the choke, allow the engine to run for 10 to 20 seconds without opening the throttle. The choke start lever disengages automatically when the throttle is opened, on the version A26BAC must be disengaged manually.

In the case the engine is hot do not use the choke lever.

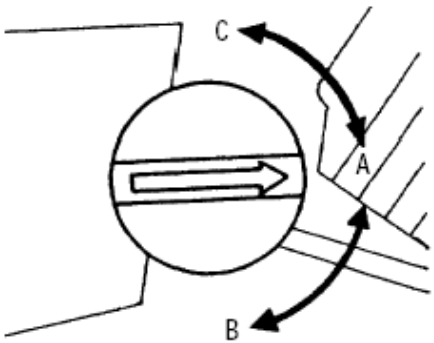
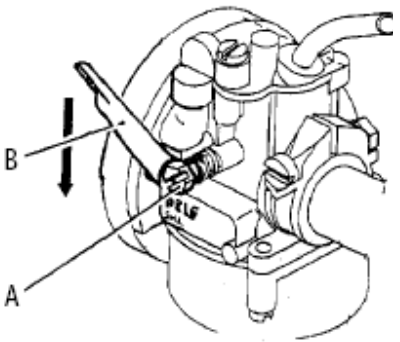
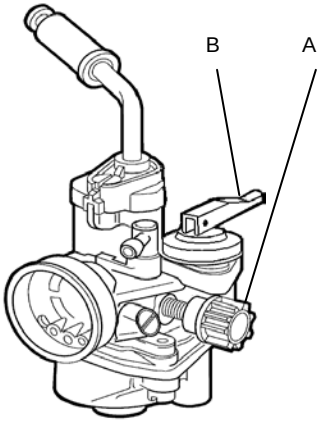


Fig.7



Variant: **A24B, A24D, A24E**



Variant: **A26B**

Fig. 8

Riding

The speed is controlled by the throttle lever (9, Fig. 1). Engaging the first or second gear is done by opening or closing the throttle. Avoid switching too frequently between first and second gears. In such situation you should instead reduce the throttle opening and keep the vehicle in first gear. When descending a slope, shortly open the throttle from time to time in order to improve lubrication and headlight operation. The vehicle is shut down by closing the throttle lever and switching the STOP button to the position off (7, Fig. 6). Then close the fuel cock (position A, Fig. 7)!
If the vehicle is to stay out of operation for a longer period (e.g. during winter), draining of the fuel from the carburetor cup in the following way is recommended: close the fuel cock and, by opening the throttle lever, let the engine run out automatically.

Engine Running-in

Do not run the engine at full throttle during the initial 100 km. Later increase the engine loading progressively.

MAINTENANCE

Maintenance Operations

The vehicle is easy to maintain, yet maintenance is imperative for perfect performance. Particularly important operations include regular lubrication of individual assemblies, gearbox oil changes, cleaning of parts affecting engine operation (spark plug, exhaust system, fuel system) and checking of safety-related riding components (tire pressure, operation of lights and brakes, tightness of bolts and nuts). The maintenance table defines maintenance works in certain intervals in km and months - **consider whichever comes first** - for the period up to 20.000 km or 24 months.

Lubricants

For the gearbox apply the automatic gearbox oil: ATF A or ATF F. For lubrication of other vehicle components (see the maintenance schedule), application of SAE 30 grade engine oil and LIS 2 grease is recommended.

Gearbox Oil Change

Oil should be changed when the engine is still warm. Remove the right side shield; release three threaded plugs (1, 2, 3, Fig. 9) on the right side of the engine casing, and let the oil drain completely. Retighten oil draining plug (3, Fig. 9) and pour approx. 300 cm^3 of oil through the refilling opening (1, Fig. 9), so that oil level reaches the control opening (2, Fig. 9). Then, retighten the oil refilling and control opening plugs.

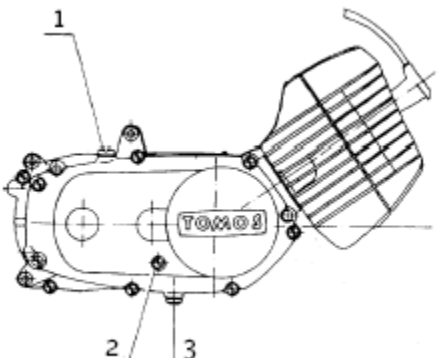


Fig. 9

Checking brake pads
Brake pads are checked visually. The pads should be replaced by an authorized service agent as soon as the brake pad wear reaches the groves (A, Fig. 10),. Check the pads for any grease smears. In the case you notice such smears, take the vehicle immediately to an authorized service agent for examination and repair.

Checking Brake Fluid
The brake fluid reservoir is attached to the right side of the steering handlebar (6, Fig. 1). With the new brake pads, the fluid level should be approx. 5mm below the tank lid. To top up the brake fluid remove the two tank cap bolts and top up the brake fluid.
When topping up, use hydraulic brake system fluid (U2). A lower level of oil in the tank indicates worn brake pads. When the brake pads are replaced, the oil level will rise by the amount of wear on the brake pads.
If the brake lever is “soft” in the hydraulic system is air. In such case please refer to an authorized service agent.

We strongly suggest making all brake maintenance and service by an authorized service agent.

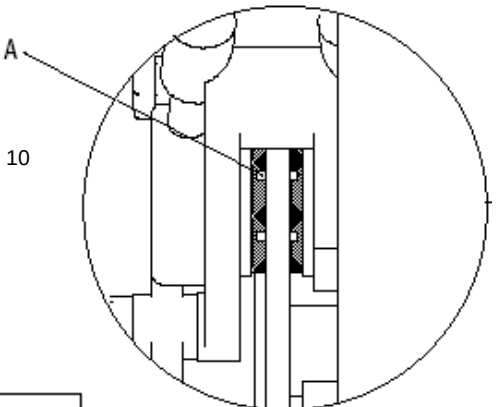


Fig. 10

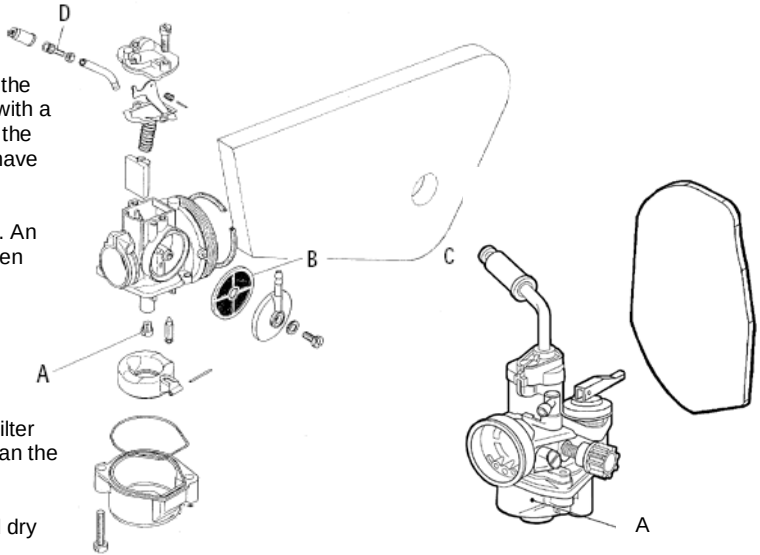
Fig. 11

Fuse replacement (version)
The fuse is located near to the battery.. If the fuse is blown, turn the ignition switch (27, Fig. 4) to the position OFF. Replace the fuse with a new one of the correct specification. Return the ignition switch to the ON position and check operation. If the new fuse blows as well, have the electrical circuit examined by an authorized service agent.

Caution: Do not install a fuse with higher capacity than specified. An incorrect fuse could seriously damage the electrical system or even cause a fire.

CLEANING

Fuel System Cleaning (Fig. 12)
As regards the fuel system, periodic cleaning of the main jet, air filter and fuel petcock filter is required. Do not use metal objects to clean the main jet; clean it with an air jet.
Filter – sponge should be washed thoroughly in gasoline. After washing, squeeze gasoline from the sponge (do not brush it) and dry the sponge in a dry air jet.



Variant: **A24B, A24D, A24E** Variant:**A26BAC**

Fig. 12

Exhaust system cleaning (Fig. 13)
The build up of soot in the exhaust system obstructs the free passage of exhaust gas and thereby reduces engine power.
Periodically, clean the cylinder exhaust duct, exhaust pipe inlet opening, piston crown and cylinder compression chamber (Fig.14).

Caution: exhaust system is equipped with catalysts, so do not enter into the exhaust pipe with any tools, wires, do not pour in any fluid, etc. Any such intervention can cause damage of the catalysts.

We strongly suggest making exhaust system cleaning by an authorized service agent.

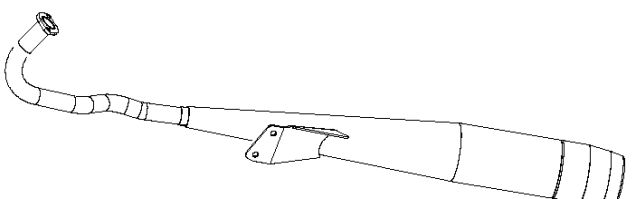


Fig. 13

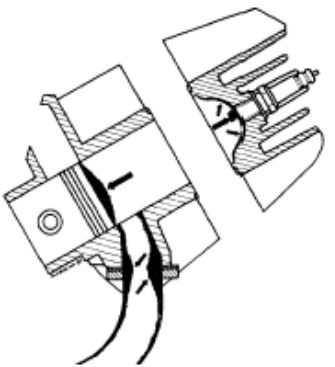


Fig. 14

Vehicle cleaning
Vehicle exterior cleaning is also part of regular maintenance. After washing, wipe the vehicle dry. Protect painted surfaces with paint protection agents. After cleaning, check the operation of the engine, the lights and brakes.

CHECK AND ADJUSTMENTS

Engine Oil Level Check
Check regularly the oil level in the oil tank. Top up as required. Should the warning light fail to extinguish after starting the engine, this means the oil level is low and immediate topping up is required.

Caution:
Electric starter version: the warning light must come on when the ignition key is turned to ON. If does not, the fault should be remedied.
Kick-starter version: the warning light lights few seconds after starting the engine. If does not, the fault should be remedied.

Bowden Adjustment
Bowden brakes are adjusted by means of the bolt on the swing arm (A, Fig. 15). The Bowden is properly set when the brake lever free travel is 10-15mm and the sleeve – lever gap is approx. 3 mm (Fig. 16). After adjusting, make sure the jam nut is retightened.

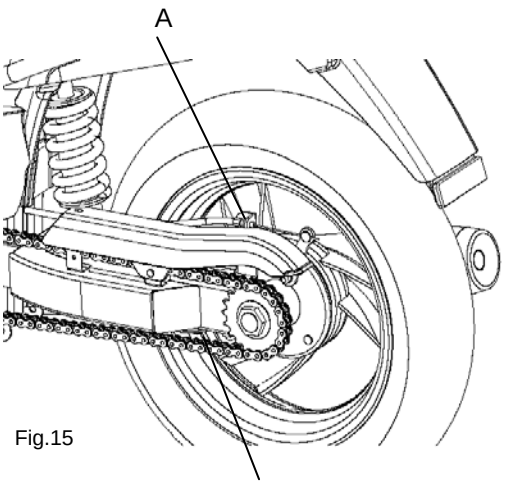


Fig.15

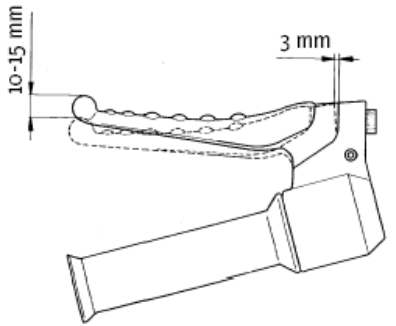


Fig. 16

Transmission Chain Adjustment
The chain tension should be adjusted so that the chain yields 10 mm up or down under pressure (Fig. 17). Adjust the chain tension by spinning the chain tension adjuster on the front fixing screw of the rear wheel holder (B, Fig. 15). After the adjustment, retighten the nuts on the both fixing screws that were party released for the adjusting.

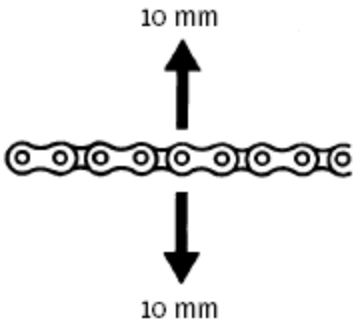


Fig. 17

Bolt and Nut Tightness
Periodically check and retighten as necessary the bolts and nuts of the main vehicle components (wheels, handlebar, shock absorber, rear fork axis, engine to frame bolts, gearbox oil drain plug).

MAINTENANCE SCHEDULE

Interval (km)	1.000	3.000	10.000, 15.000, 20.000
Interval (months)	2	6	12, 18, 24
Oil lubrication			
1. Gearbox oil change	●	●	●
2. Bowdens (internal cables)		As necessary	
3. Chain	●	●	●
Greasing			
4. Rear fork bearing bushes		As necessary	
5. Steering bearings			●
Cleaning			
6. Spark plug		As necessary	
7. Air filter (oiling)		●	●
8. Cylinder head, piston head, exhaust duct		●	●
9. Cylinder and exhaust pipe		●	●

Interval (km)	1.000	3.000	10.000, 15.000, 20.000
Interval (months)	2	6	12, 18,,24
Checks and adjustments			
10. Gearbox oil level	●	●	●
11. Brake pads	●	●	●
12. Horn and lights	●	●	●
13. Spark plug electrode clearance	●	●	●
14. Brake operation check and adj.	●	●	●
15. Steering bearing clearance	●	●	●
16. Wheel bearing clearance	●	●	●
17. Wheel track		●	●
18. Tire pressure (front and rear 2,3 bar)	●	●	●
19. Chain tension	●	●	●
20. Idle run and throttle	●	●	●
21. Bolt and nut tightness	●	●	●

BATTERY INSTALLATION (VERSION)

Battery is placed under the rear luggage carrier. (A, Fig. 18). Release the two bolts (B, Fig.18) and from the bottom side of the luggage carrier pull out the plastic box for battery. Place the battery in the box with the connection shoes upwards. Applying the bolts supplied with the battery, connect the blue color electric cable to the blue color battery connection shoe (-) and the red color electric cable to the red color battery connection shoe (+).

Caution: When placing the battery box under the mudguard, take care that cables are placed into the groove on the left side of the battery box. (C, Fig.19).

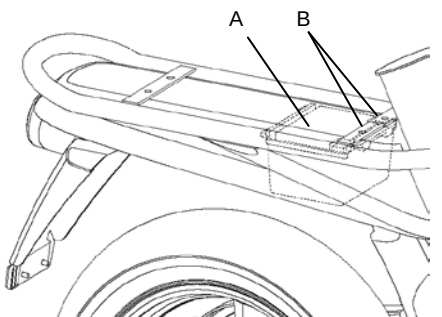


Fig.18

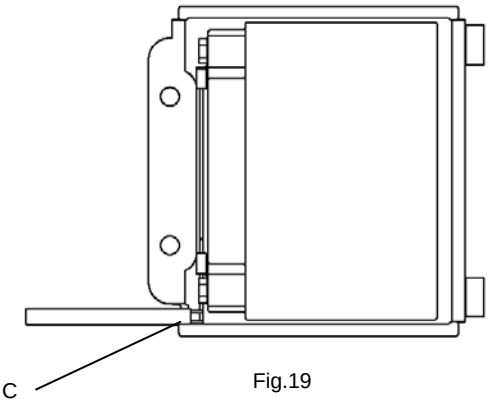


Fig.19

TROUBLESHOOTING

Fuel System Troubles

Possible causes of the engine failing to start or stopping during a ride Include, but are not limited to:

- Fuel is not supplied to the carburetor:

Check the fuel tank level and the position of the fuel cock.

- Clogged fuel strainers:

Blow the strainers clean.

- Clogged carburetor main jet:

Remove and blow clean.

- Improper use of the choke lever:

Use the lever in accordance with the engine start instructions.

- Low engine idle speed setting:

Using the adjustment bolt (A, Fig. 8), increase the engine speed

Ignition System Troubles

Check the spark. Possible causes of the ignition spark plug failing to produce a spark include:

- Wet spark or electrodes in a short circuit:
- Spark plug electrodes frequently in a short circuit:

Clean soot build-up from the cylinder head and piston head.

- Spark plug electrodes are worn out:

Adjust the electrode clearance according to the specifications, or Replace the spark plug with a new one.

- Spark plug cap improperly mounted or short-circuiting to the Ground mass:

Properly mount the cap on the spark plug or replace with a new cap.

- Ignition coil:

Have the trouble examined and remedied by an authorized service agent.

Troubles Causing Reduced Engine Power

Possible causes of reduced engine power and reduced vehicle road performance include:

- Inadequate spark plug or cylinder head tightness:

Tighten the spark plug or the cylinder head nuts.

- Clogged air cleaner on the carburetor:

Wash in gasoline, blow dry and oil lightly.

- Clogged exhaust system: clean.

Gearbox Troubles

- Following the start, the engine runs at idle speed. If opening the throttle fails to engage the clutch:

Release the throttle and attempt to start the vehicle again (the oil is still cold and thicker). When riding, open the throttle gradually to prevent engine jerks. If the problem is frequent, have it repaired by an authorized service agent.

- The clutch slides (particularly in cold weather):

Improper oil type in the gearbox - change with the specified oil.

- The clutch takes excessively long to switch to the second gear or does not switch at all:

Reduced engine power - clean the exhaust silencer;

The clutch is stuck - try to activate the clutch at higher engine revs, with the vehicle propped up on a stand;

Excessive amount of oil in the gearbox - check the oil level.

- After engaging the second gear, the clutch jerks:

Chain is too loose - adjust the chain□ tension;

Low gearbox oil level - top up to the specified level.

- With the engine shut down, it is difficult to move the vehicle forwards-backwards:

Have the trouble examined by an authorized service agent.